REMARKS

This Amendment and Request For Reconsideration is filed in response to the Office Action mailed on 24 January 2007 for the above-referenced patent application.

Prior to the filing of this paper, the present application included claims 1-4 and 6-34 which were rejected in the Office Action of 24 January 2007. In the present Amendment, the Applicants amend claims 1, 15, 21, and 28. Therefore, claims 1-4 and 6-34 as amended are pending in the present application. As required by 35 U.S.C. § 132, no new matter has been entered by amending claims 1, 15, 21, and 28.

The Applicants respectfully request entry of the Amendment and reconsideration of the present application in light of the arguments provided herein.

In the Office Action of 24 January 2007, the Examiner rejected claims of the present application under 35 U.S.C. § 102 and 103 based on U.S. Patent No. 6,477,363 to Ayoub and U.S. Patent No. 6,907,238. In response, the Applicants respectfully disagree with the Examiner's rejections and submit that all claims as amended are allowable over the prior art of record for at least the following reasons.

For proper rejections under 35 U.S.C. § 102 and § 103, the prior art individually or in combination must teach or suggest each and every claim limitation. Further, for proper rejection under 35 U.S.C. § 103, there must be an adequate suggestion or motivation to combine the teachings of the prior art.

According to the present invention, a technique to facilitate the determination of Global Positioning System (GPS) location information *without disrupting voice communications of a voice call* involving a mobile station is provided as defined in claims 1-4 and 6-20. For reduced complexity and cost, the inventive technique utilizes the same wireless transceiver for both voice call communications via a wireless communication network and GPS fix communications via a GPS system. Although the

same wireless transceiver is utilized to facilitate the determination of GPS location information, voice communications of the voice call are not adversely disrupted.

In the such technique, GPS navigational-type data is received through the wireless transceiver and stored in memory prior to voice communications of a voice call involving the mobile station. Sometime during operation, a voice call request for a voice call by an end user is received through a user interface. In response to receiving the voice call request, the following actions are taken. GPS assistance data is derived based on the stored GPS navigational-type data. The wireless transceiver is tuned to a GPS frequency to receive signals from the GPS system through the wireless transceiver, and a GPS fix is performed with the signals from the GPS system through the wireless transceiver using the GPS assistance data, to thereby obtain GPS measurement data. After the GPS fix is performed, the wireless transceiver is retuned to signals of the wireless communication network, and the voice call for the voice call request is established and maintained for the mobile station through the wireless communication network with the wireless transceiver. During the voice call, the GPS measurement data and a request for calculating a location of the mobile station is transmitted to a location server in the wireless communication network for calculating the location of the mobile station based on the GPS measurement data.

An alternative inventive technique to facilitate the determination of GPS location information *without disrupting voice communications of a voice call* involving the mobile station is also provided as defined in claims 21-34. Again, for reduced complexity and cost, the inventive technique utilizes the same wireless transceiver for both voice call communications via a wireless communication network and GPS fix communications via a GPS system. Although the same wireless transceiver is utilized to facilitate the determination of GPS location information, voice communications of the voice call are not adversely disrupted.

In this alternative technique, a trigger signal indicative of a request to terminate a voice call maintained over the wireless communication network is identified through a user interface of the mobile station. This request to terminate the voice call may be

identified through use of an END key of the user interface, for example. In response to identifying the trigger signal indicative of the request to terminate the voice call, the following actions are taken. The wireless transceiver is tuned to a GPS frequency to receive signals from the GPS system through the wireless transceiver, and a GPS fix is performed with the signals from the GPS system using GPS assistance data to thereby obtain GPS measurement data. After the GPS fix, the wireless transceiver is retuned to signals of the wireless communication network, and the GPS measurement data and a request for calculating a location of the mobile station is transmitted through the wireless transceiver to a location server in the wireless communication network for calculating the location of the mobile station based on the GPS measurement data. Thereafter, the voice call is terminated responsive to the trigger signal indicative of the request to terminate the voice call.

As apparent, the Applicants have revised the claims to further clarify that the mobile operation utilizes the same wireless transceiver (e.g. the same CDMA transceiver) in the technique. As recited in the claims, the mobile station is required to tune its wireless transceiver to a GPS frequency of the GPS system for the GPS fix and subsequent retune the wireless transceiver back to the wireless network for the voice call (e.g. claims 1-4 and 6-20). Simply put, the prior art of record fails to teach or suggest these limitations as claimed in combination. Ayoub et al. utilizes both a GPS receiver 12 and a cellular transceiver 15, and does not teach the use of shared wireless transceiver circuitry. Similarly, Leung teaches an RF receiver 522 for cellular communications and a GPS receiver 528, stating merely that "[f]or some embodiments, terminal 110 does not include GPS receiver 528" (col. 11 at lines 2-4) without detailed elaboration.

Note that Ayoub et al. teach two different techniques, the first alternative technique of FIG. 1 and the second alternative technique of FIG. 2. In the first alternative technique of FIG. 1, Ayoub et al. describe that "[w]hen an emergency call is requested from handset module 14 by pressing 911 on the keypad or pressing a dedicated panic button, a transceiver 15 generates the emergency call and communicates via an antenna 16 through the cellular network to the authority 4. When the communication between the

mobile phone and the authority is established, the position is translated into audio tones which are transmitted through the voice channel of the telephone call connection" (see e.g. column 4 at lines 15-23 of Ayoub et al.). Thus, in the first alternative technique of Ayoub et al, there is no teaching, suggestion, or motivation for a GPS fix to be performed with the signals from the GPS system through the wireless transceiver using the GPS assistance data to thereby obtain GPS measurement data *in response to the voice call request, but prior to establishing the voice call.*

In the second alternative technique of FIG. 2 of Ayoub et al., there is no adequate suggestion or motivation to modify the teachings such that, *during the voice call,* GPS measurement data and a request for calculating a location of the mobile station is transmitted to a location server in the wireless communication network for calculating the location of the mobile station based on the GPS measurement data. The reason is that the mobile phone of Ayoub et al. needs to submit the position information *prior to establishing the voice call* for proper routing of the call. See e.g. Ayoub et al. at column 5 at lines 20-23 which states that "[t]he DID numbers are evaluated by the receiving equipment during the setup phase of the call, before a telephone call connection is fully established," and column 5 at lines 34-38 which states "[a]s the DID represents the location of the caller, the MTSO, the CO and the ANI/MIN controller are able to pass the call to the proper 911 station 3 that is nearest to the emergency location and that can manage the emergency case best." Thus, to modify such technique to that of the claimed technique would be to undesirably alter the operation and intent of the primary reference, as the position information would no longer be utilized for proper routing of the call.

Finally, with respect to claims 21-34 only, the prior art of record also fails to teach or suggest the step of "in response to identifying the trigger signal indicative of a request to terminate a voice call: causing a GPS fix to be performed with a GPS system using GPS assistance data to thereby obtain GPS measurement data" (e.g. claims 21-34). In attempt to identify an equivalent teaching in Ayoub et al., the Examiner cites to passages in Ayoub et al. at 4:15-19 and 4:20-35. The referenced passage of Ayoub et al. generally describes a mobile phone that detects a voice call request – not a termination

request – and then transmits audio tones representing longitude and latitude during the call to an authority or during call setup. The Examiner makes reference to a "panic button" in the prior art at column 4 at lines 15-9. This is not the same as identifying a trigger signal indicative of a request to terminate a voice call, and the Examiner fails to articulate any reason why it would or could be. A "panic" button is not the same as an END key, as one skilled in the art will readily appreciate.

Based on the above, the Applicant respectfully requests the Examiner to withdraw all rejections and allow all pending claims 1-4 and 6-34 as amended. The Applicant respectfully submits that the present application is now in a condition suitable for allowance based on the claim amendments and arguments provided herein.

Thank you. The Examiner is welcome to contact the undersigned if necessary to expedite prosecution of the present application.

Respectfully submitted,
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